



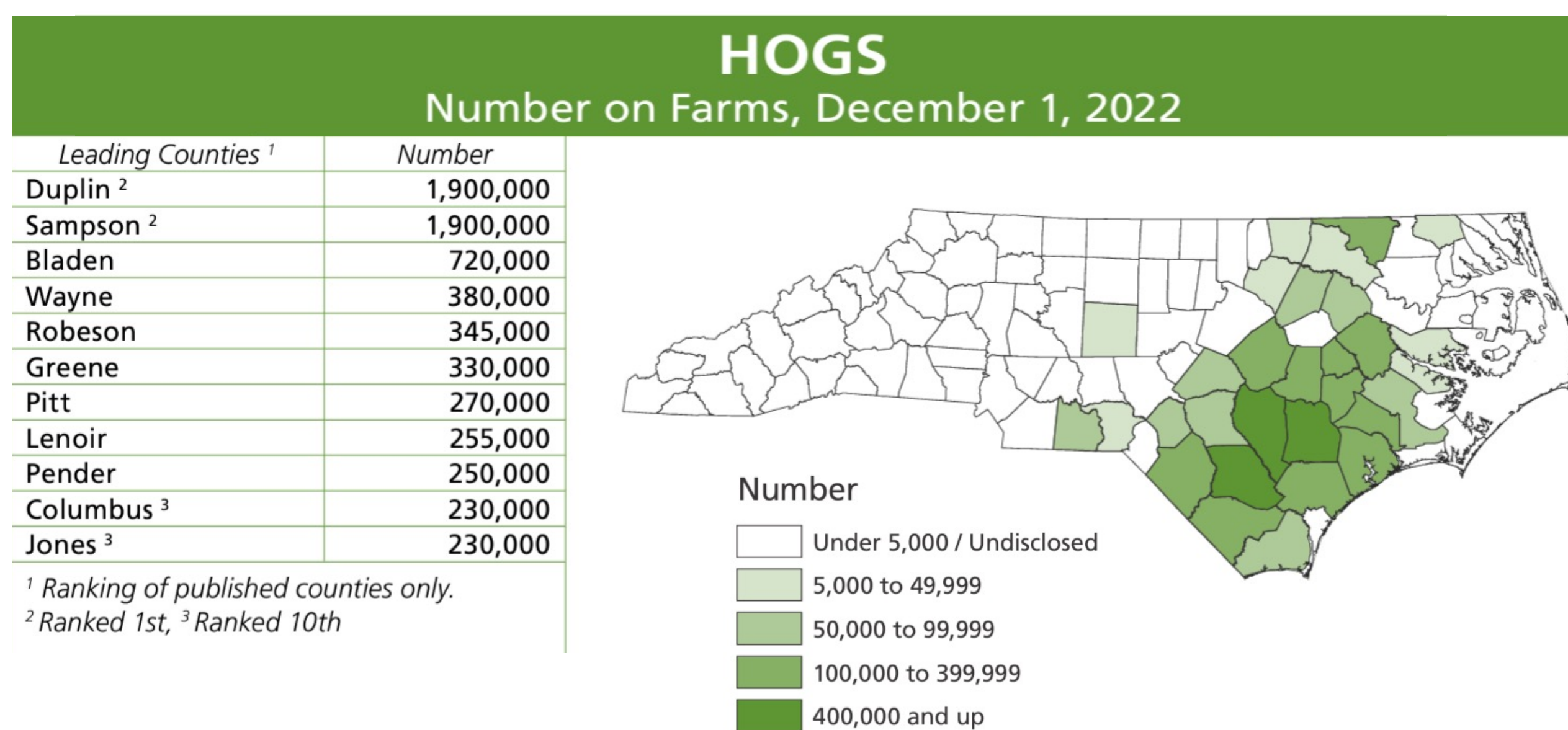
Animal Waste Training For North Carolina Hog Producers

Becky Spearman, Livestock Extension Agent, NC Cooperative Extension - Bladen County, becky_spearman@ncsu.edu
 Agents: Max Knowles, NCCE – Sampson County, Amanda Hatcher, NCCE- Duplin County,
 and Stefani Sykes, NCCE- Wayne County

Specialists: Dr. Mahmoud Sharara, Extension Specialist, Department of Biological and Agricultural Engineering, NC State University and Dr. Steph Kulesza, Extension Specialist, Department of Crop and Soil Sciences, NC State University

Introduction

North Carolina Cooperative Extension is the lead agency in providing education and training opportunities for animal waste producers. Extension agents with the help of specialists provide certification classes for operators on permitted animal farms and for technical specialists who advise those operations. Training is through classes, field days, and tours. The state of North Carolina, through the Department of Environmental Quality (DEQ), requires all permitted animal waste facilities must have at least one operator to ensure all rules and regulations are followed.



Educational Programs

Initial Class for Operators in Charge (OIC)

- Operators attend a mandatory 10-hour class and sit for a 50-question exam administered by state agency to be certified.
- Agents teach the nine chapters that include an introduction, rules and regulations, waste utilization plans, tools for the plan, system components and operation, proper application of waste products, record keeping, safety, and emergencies and catastrophes.
- Farmers receive Type A certification for swine and liquid poultry systems or type B for dairy, horse, beef and other high fiber systems.

Continuing education classes for OICs

- All OIC's must receive 6 hours of credit every 3 years.
- In 2025, there were 1,796 type A and 202 type B operators.
- During Covid-19, a group of agents planned statewide Zoom classes to assist operators to receive their continuing education credits.
- The Zoom model was very popular and the state approved them to continue. Yearly, there are at least two - 3 hour Zoom classes taught.
- The Zooms are recorded, so agents can show the videos to producers in a convenient location at any time. Saving producers time and travel.
- The large hog counties also have numerous in-person classes.
- Topics range from waste utilizations, new technologies, safety, weather, planning for disasters, ventilation, insect and rodent control, sludge management, forage and crop management including pest control, and many more.
- Zoom training attendance: In 2025, 110 producers. In 2024, 238 producers. In 2023, 126 producers.

Educational Programs Continued

Continuing education classes for Technical Specialists

- Agents and specialists provided the majority of continuing education classes for technical specialists as part of their requirement to receive 6 hours of credit every 3 years.
- On average 30 participants attend these events.
- Eastern North Carolina Technical Assistance Group (ENCTAG) – the Bladen Agent is co-chair of the group and sets up the tours.
- Host a yearly field day or tour on some of the following topics.
 - Sludge drying technology including greenhouse and wetlands
 - Digester systems for swine and ag materials/food waste
 - Composting of swine sludge
 - NC State University Lake Wheeler Facility Research Projects



Swine Sludge Composting tour



NCSU's Lake Wheeler Tour



Technical Specialist Field Day

Resources Developed



Digester Q & A Video
Posted 2025 - 409 views.



Sludge Greenhouse Video
Posted 2023 - 9.2K views.



Agent and Producer Video Series

Three agents and four Specialists received an NCSU Extension Innovation Grant to plan and video a series with assistance from NCSU Biological and Ag Engineering Department. An agent field day that discussed all the video topics was held also. Series posted on YouTube in early 2026 - 285 views.



Chad Poole
Assistant Professor and Extension Specialist
NC State Biological and Agricultural Engineering

Becky Spearman
Bladen County Extension Director and Livestock Agent
North Carolina Cooperative Extension

Educational Results



93% of producers learned new ideas on the continuing education Zoom.



36% said they would make changes to their farm based on what was learned on the continuing education Zoom.

Farmer comments from surveys from the Zoom series:

- When asked why was the Zoom option important to you:
 - multiple responded with reduced travel time and expense
 - more efficient use of time and convenient
 - several had personal reasons such as mobility issues and being hearing impaired
- When asked what changes will you make, responses include:
 - Multiple said spraying weeds - when and what chemicals to spray
 - All of the sessions gave me ideas on how to improve such as new sensor technology
 - Different types of sludge removal available.
 - To pay more attention to maintenance needed on the farm
 - To train employees on leaking around buildings

What members of The Eastern North Carolina Technical Assistance Group (ENCTAG) say about the trainings:



100% learned new ideas from ENCTAG tour and field days.



86% adopted new practices from information learned.

The group is valuable because it provides a forum for Technical Specialists to come together:

To discuss issues that affect the agricultural industry, such as environmental regulations, rules and their ever-changing interpretations, assistance programs (cost share), etc.

To share experiences of various situations and resolutions they've encounters and learn from these experiences, to improve.



To keep current and knowledgeable on the issues to better provide the support and technical services they are tasked with.

To have a voice in determining future regulations. Members know how regulations were originally designed and understand how they have changed animal waste management over time. The less we are involved, the more likely there will be new interpretations of the old rules that will affect producers in a negative way.